

Name: _____

Date: _____

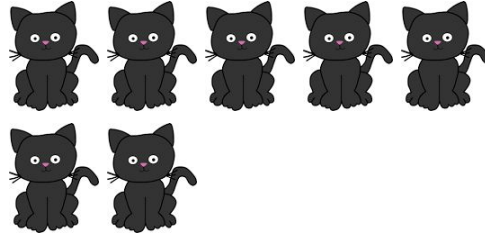
Unit One Practice Test - Part One

1. Use the linear pattern below to answer questions a - d.

Step 0



Step 1



Step 2



Step 3



a. What is the rate of change? _____

b. What is the starting amount? _____

c. Write a linear equation that models the situation. _____

d. Thinking Backwards: How many cats were present in Step Negative 3?

_____ cats

2. Identify the dependent and independent variables in each situation.

a. the height of a baby based upon the number of months

dependent: _____

independent: _____

b. the number of hours worked and the amount of money made

dependent: _____

independent: _____

c. the number of steps and the number of cats (from problem #1)

dependent: _____

independent: _____

3. Writing:

a. Using complete sentences and algebraic terms, define RATE OF CHANGE.

-

-

-

-

b. Using complete sentences and algebraic terms, describe the relationship between a pair of parallel lines.

-

-

-

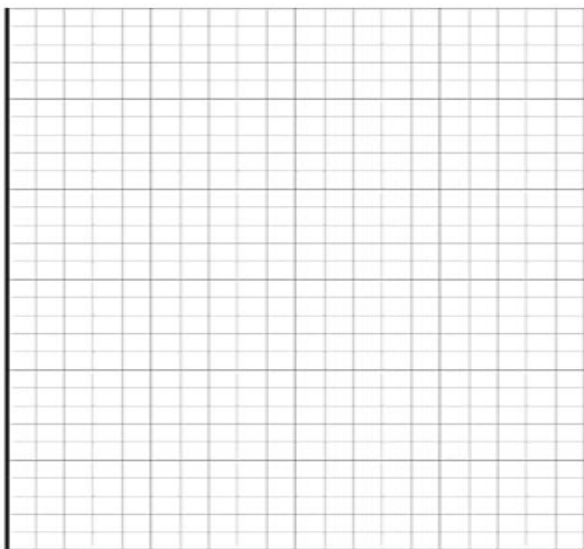
-

4. Khalil increases the number of books he reads per year by three.

a. Fill in the table of values.

# of Years	0	1	2	3	4
# of Books	12				

b. Graph the data. Be sure to label your axes.



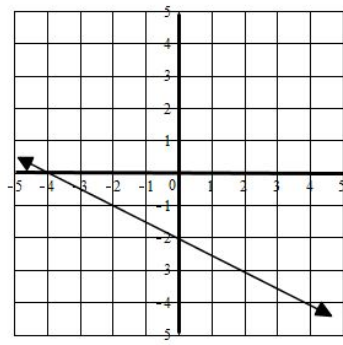
c. Identify the dependent and independent variables.

dependent: _____ independent: _____

d. Write a linear equation that models the situation.

5. Identify the slope and y-intercept of each line.

a. $y = -x - 9$	b. $y = \frac{1}{7}x$	c. $y = x + 10$
slope = _____ y-int = _____	slope = _____ y-int = _____	slope = _____ y-int = _____



d.

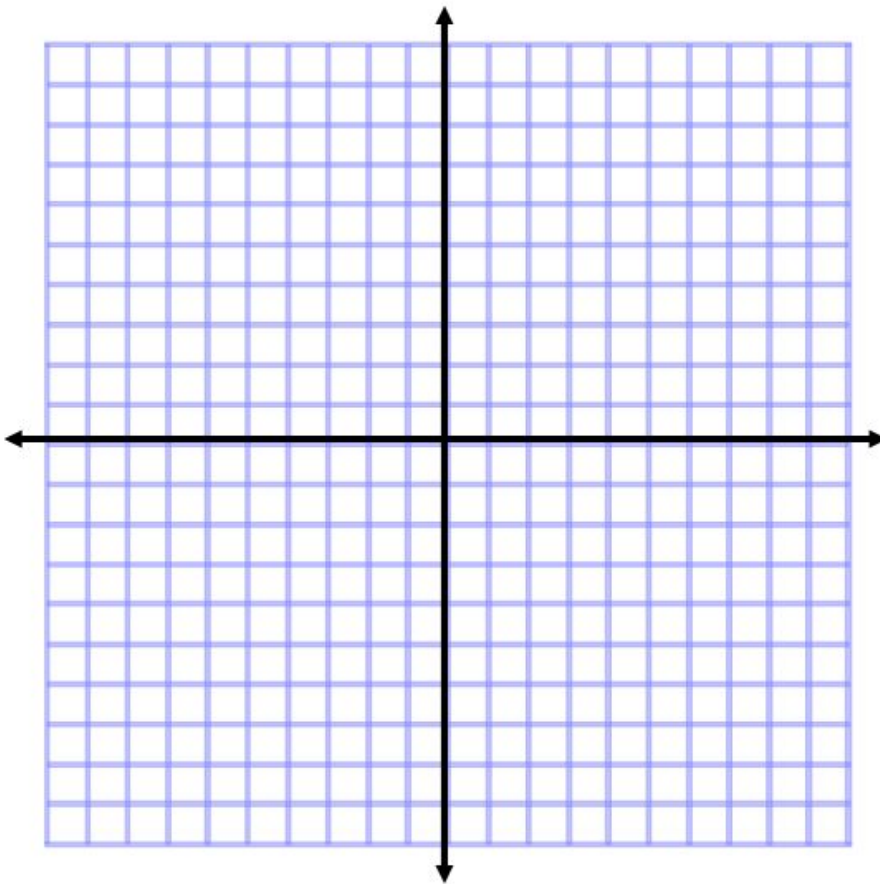
slope = _____ y-int = _____

6. Graph each equation on the coordinate plane below. Be sure to extend and name your lines.

$$y = x + 8$$

$$y = -2x$$

$$y = \frac{1}{2}x - 3$$



7. Aaron has \$10,000 in his bank account today and will be saving \$4,000 per year.

a. What is the starting amount? _____ b. What is the rate of change? _____

c. Write an equation in slope intercept form to model this situation.

d. What will Aaron's total amount of money be after seven years of saving?

\$ _____

8. Slope: Please find the slope of the line between the two given points.

a. (9, -2) and (5, 6)

b. (4, -12) and (5, -12)

c. (3, -1) and (-2, -1)

d. (4, -12) and (4, -8)

9. Writing Equations of Lines: Write the equations of the lines in slope-intercept form.

a. slope = -1; y-int = 5

b. slope = 3; y-int = 6

c. y-int = -8; slope = $\frac{4}{5}$

d. the equation of the line that passes through (-1, 8) and (2, 11)

Step 1: Find the slope of the given line using slope formula.

Step 2: Pick ONE of the given points. Substitute x, y and m into $y = mx + b$ and solve for b.

Step 3: Write the equation of the line in slope-intercept form. _____

10. Write the equation of the line in slope-intercept form that is parallel to $y = \frac{4}{5}x - 3$ and passes through the point (10, 6).

Step 1: Take the slope of the given line. _____

Step 2: Substitute the x and y from the given coordinate and the slope of the given line into $y = mx + b$ and solve for b.

Step 3: Write the equation of the line in slope-intercept form. _____

11. Write the equation of the line in slope-intercept form that is perpendicular to $y = \frac{4}{5}x - 3$ and passes through the point (12, -1).

Step 1: Take the negative reciprocal of the slope of the given line. _____

Step 2: Substitute the x and y from the given coordinate and your new slope into $y = mx + b$ and solve for b.

Step 3: Write the equation of the line in slope-intercept form. _____

12. Write the equation of the line in slope-intercept form shown by the graph below.

